# Role of Serology, Neuroimaging and Stool Examination in Diagnosis of Neurocysticercosis

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**Background**

Neurocysticercosis (NCC) is the infection of Central nervous system by the larval stage of *Taenia solium* (pork tapeworm). This tapeworm is a public health problem in most developing countries where pigs are raised and pork is consumed and where poverty, illiteracy and deficient sanitary infrastructure are common. The main objective of this study is to find out the diagnostic significance of Serology and Neuroimaging and to detect intestinal carriers of the tapeworm.

**Methods**

The design of the research is exploratory and descriptive and also analytical. It is based on qualitative questions, the laboratory data and imaging studies. The study site is Manipal Teaching Hospital (MTH), Pokhara. The patients of pediatric age group (age 1 to 15 years) who visit to the pediatric department either as an out-patient or in-patient are included in the study. During the study period from January 2008 to January 2010, a total of 200 samples of serum for serology and Stool for microscopy was collected and microbiologically processed.

**Results**

Out of 200 samples of serum, 100 were from the cases with diagnosis of Neurocysticercosis. Pig rearing was seen in 26% of the cases. And 30% (8) of pig rearing children had harbor taenia species in intestine. The most commonly affected age group was 8-14 years. ELISA sensitivity, specificity, positive predictive value and negative predictive value were 87%, 84%, 84.7% and 86.6% respectively.

**Conclusions**

Neurocysticercosis should be suspected in any cases with neurological symptoms (especially partial seizure) in Taenia endemic regions. Neuroimaging should be done in cases with clinically and epidemiologically suspected Neurocysticercosis to identify the type, location, nature/stages and number of intracranial lesions.

**Keywords:** cases; diagnosis; Neurocysticercosis; Neuroimaging; serology.